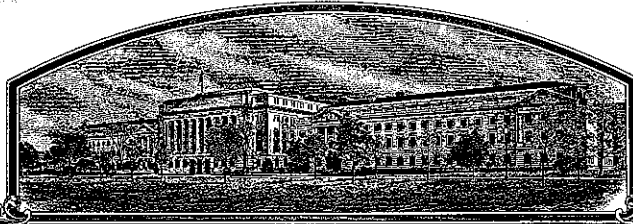


No.

200500003



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Board of Supervisors of Louisiana State
University and A&M College

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC RENOVATION OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'LA841'

In Testimony Whereof, I have hereunto set my hand
and caused the seal of the Plant Variety
Protection Office to be affixed at the City of
Washington, D.C. this fourth day of February, in
the year two thousand and five.

Attest:


Commissioner
Plant Variety Protection Office
Agricultural Marketing Service


Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Board of Supervisors of Louisiana State University and A&M College		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME LA90518PB43-3-1-4		3. VARIETY NAME LA841	
4. ADDRESS <i>(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</i> LSU AgCenter 104 J. Norman Efferson Hall PO Box 25055 Baton Rouge, LA 70894		5. TELEPHONE <i>(include area code)</i> (225) 578-2110		FOR OFFICIAL USE ONLY PVPO NUMBER <div style="font-size: 2em; font-weight: bold;">2005 00003</div> FILING DATE <div style="font-size: 1.2em;">October 7, 2004</div>	
6. FAX <i>(include area code)</i> (225) 578-1403		7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION <i>(corporation, partnership, association, etc.)</i> landgrant university			
8. IF INCORPORATED, GIVE STATE OF INCORPORATION landgrant university		9. DATE OF INCORPORATION landgrant university		FILING AND EXAMINATION FEES: \$ 3652.00 DATE 10-7-2004 CERTIFICATION FEE: \$ 432.00 DATE 12-7-2004	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. <i>(First person listed will receive all papers)</i> Dr. Stephen A. Harrison LSU Agronomy Dept. 104 MB Sturgis Hall Baton Rouge, LA 70803-2110					
11. TELEPHONE <i>(include area code)</i> (225) 578-2110		12. FAX <i>(include area code)</i> (225) 578-1403		13. E-MAIL sharrison@agctr.lsu.edu	
14. CROP KIND <i>(Common Name)</i> wheat (common)		16. FAMILY NAME <i>(Botanical)</i> Poaceae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED <i>(Follow instructions on reverse)</i>					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety <i>(Optional)</i> e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample <i>(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)</i> g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" <i>(Mail to the Plant Variety Protection Office)</i>					
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? <i>(See Section 83(a) of the Plant Variety Protection Act)</i> <input type="checkbox"/> YES <i>(If "yes", answer items 21 and 22 below)</i> <input checked="" type="checkbox"/> NO <i>(If "no", go to item 23)</i>					
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED					
22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED <i>(If additional explanation is necessary, please use the space indicated on the reverse.)</i>					
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. <i>(Please use space indicated on reverse.)</i>					
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. <i>(Please use space indicated on reverse.)</i>					
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER 			SIGNATURE OF OWNER Stephen A. Harrison		
NAME <i>(Please print or type)</i> Stephen A. Harrison			NAME <i>(Please print or type)</i> Stephen A. Harrison		
CAPACITY OR TITLE breeder - Professor		DATE 10/04/2004		CAPACITY OR TITLE breeder - Professor	
DATE 10/04/2004		DATE 10/04/2004		DATE 10/04/2004	

(See reverse for instructions and information collection burden statement)

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

none

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

October 27, 2003. commercial sale.

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

none

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit A
Origin and Breeding History
Terral 'LA841' Wheat

Terral 'LA841' was developed and is fully owned by the LSU Agricultural Experiment Station, Louisiana Agricultural Experiment Station as follows.

The original cross, designated GA9113, was made by Dr. Phil Bruckner in 1991. The pedigree of GA9113 is: GA8665-D4/GA85238-C3

The parent, GA85238-C3-AB3, is a selection from a bulk population of FL85238, a cross made by Dr. Ron Barnett in 1985 and shared with the south Georgia program. 'Morey' (PVP9500288) was released the Universities of Georgia and Florida from this cross. FL85238 has the pedigree: FL8172-G116/Florida 303. Florida 303 is a released variety (PVP 9000018). FL8172-G11b is a non-released sister line of the released variety, Florida 304 (PVP 9300295).

GA8665-D4 is a high-yielding, leaf rust and powdery mildew resistant selection from the 1991 Tifton, GA wheat prelim-B nursery. Its pedigree is FR81-19/Saluda. Saluda (PVP 8500007) was released by Virginia Tech in 1983. FR81-19 has the pedigree: Champlain/Alonde (68)/4/Aegilops ventricosa//Marne*3/3/Moisson. FR81-19 was entry 2055 in the 1983 USDA International Winter Wheat Powdery Mildew nursery.

1991: The F1 population was grown as spaced plants at the USDA-ARS National Small Grains Germplasm Research Facility in Aberdeen, ID during the summer of 1991

1992: The F2 generation was grown as a bulked populations in Georgia. Dr. Bruckner accepted employment at Montana State University in 1992. Because the LSUAC and Georgia programs cooperated closely and the south Georgia program would not be continued, populations were selected and heads harvested by Dr. Stephen Harrison of the LSU AgCenter. These populations were donated and became exclusive property of the LSU AgCenter.

1993: F2:3 headrows were sent to the LSUAC in 1992, these were designated cross LA90518, where 90 indicates the year of the cross and 518 is the 18th cross in the 500 series received from Bruckner. LA90518 derives from the 43rd head sent from that cross (GA9113). It was F3 wheat headrow 8,867 selected at the LSUAC Central Stations Ben Hur Research Farm in the 1993 growing season.

1994 - 1996: LA90518 was selected at Ben Hur as F3:4, F4:5, and F5:6 headrows in 1994, 1995, and 1996, respectively. Selection was based on resistance to diseases, particularly leaf and stripe rust; general plant vigor; and tillering. LA841 (LA90518) derives from a single F6 headrow harvested in 1996.

It was evaluated in observations plots in 1997 as an F5-derived line, LA90518PB43-3-1-4. It was evaluated in replicated yield trials, Wheat Prelim-B in 1998, and Wheat Prelim-A in 1999. It has been tested in statewide yield trials since 2000 and the USDA Uniform Southern Soft Red Winter Wheat Nursery in 1999-2000 and 2000-2001 as LA90518PB43-3-1-4.

Selection and Observed Characters

LA422 is an F_3 derived line. Selection criteria is outlined above and included selection for leaf and stripe rust resistance and plant type in each generation. The variety has been shown to be true-breeding across multiple generations and environments.

Stability:

The variety has been observed to be stable and uniform across multiple locations from 1997 through 2004 (eight generations).

Variants

The variety has a low frequency of variants that include:

1. Slightly taller (up to 9 cm) variants occur at up to 0.05% frequency.

Exhibit B
Novelty Statement
LA4841 wheat
 October 2004

LA841 is most similar to LA422 (PVP200000321). Both varieties are short vernalization winter wheats, are long- and fully-awned, and have similar heading dates and heights. LA841 is 0.5" taller and has the same heading as LA422 based on data across Louisiana for 2002 and 2003. Both varieties have fairly broad, green leaves.

LA841 is resistant to prevalent races of stripe rust whereas LA422 is susceptible. In the 2002 Louisiana statewide wheat trials, LA422 had 39% average stripe rust whereas LA841 had 1% (LSD 0.05 = 24%). In 2003 LA841 had 0% stripe rust and LA422 had 37% stripe rust.

Wheat performance trial across Louisiana for 2002.				
Entry	Yield bu/a	heading day day of year	Plant ht in	Stripe rust %
LA90518PB43-3-1-4	68.3	94	33	1
Terral LA422	61.7	95	33	39
Mean (44 entries)	54.3	98	35	15
LSD	10.3	4	2	24
Data from Baton Rouge, Bossier City, Crowley, Jeanerette, St. Joseph, and Winnsboro, LA for the 2002 harvest season.				

Wheat performance trial across Louisiana for 2003.				
Entry	Yield bu/a	heading day day of year	Plant ht in	Stripe rust %
LA90518PB43-3-1-4	82.6	97	36	0
Terral LA422	69.9	96	35	37
Mean (42 entries)	72.8	98	38	13
LSD	8.3	4	1	14
Data from Alexandria, Baton Rouge, Bossier City, Crowley, Jeanerette, St. Joseph, and Winnsboro, LA for the 2003 harvest season.				

LA422 has green leaves whereas those of LA841 are dark bluish-green (waxy), approximating RHS139A.

LA841 is resistant to Hessian Fly races GP and E according to tests conducted by the USDA Hessian Fly lab whereas as LA422 is susceptible to all biotypes.

LA422 is resistant to PLMQ, MCJL, TCDL, LBBQ, TCBQ, TLGG, and PNML races of leaf rust as determined by the USDA Cereal Disease Lab. LA841 is resistant to CLBL, MCGL, LCBQ, LBBQ, THDL, TNRL, TLGP, PLML, FCMQ.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Wheat (*Triticum* spp.)

NAME OF APPLICANT (S) Board of Supervisors of Louisiana State University and A&M College	TEMPORARY OR EXPERIMENTAL DESIGNATION LA90518PB43-3-1-4	VARIETY NAME LA841
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) LSU AgCenter 104 J. Norman Efferson Hall PO Box 25055 Baton Rouge, LA 70894		FOR OFFICIAL USE ONLY PVPO NUMBER 2005 00003

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

- 1 = Common
2 = Durum
3 = Club
4 = Other (Specify) _____

2. VERNALIZATION:

- 1 = Spring
2 = Winter
3 = Other (Specify) _____

3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

- 1 = Prostrate 2 = Semi-Erect 3 = Erect

5. PLANT COLOR: (boot stage)

- 1 = Yellow-Green
2 = Green
3 = Blue-Green
RHS 139A
dark green

6. FLAG LEAF: (boot stage)

- 1 = Erect 2 = Recurved
 1 = Not Twisted 2 = Twisted
 1 = Wax Absent 2 = Wax Present

7. EAR EMERGENCE:

Number of Days (Average)

Number of Days Earlier Than *

Same As

* LA 422

Number of Days Later Than *

* AGS 2000

*Relative to a Commercial Variety Grown in the Same Trial

8. ANTHOR COLOR:

- 1 = Yellow 2 = Purple

9. PLANT HEIGHT: (from soil to top of head, excluding awns)

2005 00003

cm (Average)

cm Taller Than

LA422

Same As

cm Shorter Than

AGS2000

10. STEM:

A. ANTHOCYANIN

1 = Absent 2 = Present

B. WAXY BLOOM

1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

1 = Absent 2 = Present

D. INTERNODE

1 = Hollow

2 = Semi-Solid

3 = Solid

Number of Nodes

E. PEDUNCLE

1 = Erect

2 = Recurved

3 = Semi-Erect

cm Length

F. AURICLE

Anthocyanin

1 = Absent

2 = Present

Hair:

1 = Absent

2 = Present

11. HEAD: (at maturity)

A. DENSITY

1 = Lax

2 = Mid-dense (Laxidense)

3 = Dense

B. SHAPE

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (Specify)

C. CURVATURE

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

1 = Awnless

2 = Apically Awnletted

3 = Awnletted

4 = Awned

12. GLUMES: (at maturity)

A. COLOR

1 = White

2 = Tan

3 = Other (Specify)

B. SHOULDER

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

7 = Other (Specify)

C. SHOULDER WIDTH

1 = Narrow

2 = Medium

3 = Wide

D. BEAK

1 = Obtuse

2 = Acute

3 = Acuminate

E. BEAK WIDTH

1 = Narrow

2 = Medium

3 = Wide

F. GLUME LENGTH

1 = Short (ca. 7mm)

2 = Medium (ca. 8mm)

3 = Long (ca. 9mm)

G. WIDTH

1 = Narrow (ca. 3mm)

2 = Medium (ca. 3.5mm)

3 = Long (ca. 4mm)

13. SEED:

A. SHAPE

- ☒ 1 = Oval
☐ 2 = Oval
☐ 3 = Elliptical

B. CHEEK

- ☒ 1 = Rounded
☐ 2 = Angular

C. BRUSH

- ☒ 1 = Short
☐ 2 = Medium
☐ 3 = Long
- ☐ 1 = Not Collared
☐ 2 = Collared

D. CREASE

- ☒ 1 = Width 60% or less of Kernel
☐ 2 = Width 80% or less of Kernel
☐ 3 = Width Nearly as Wide as Kernel
- ☒ 1 = Depth 20% or less of Kernel
☐ 2 = Depth 35% or less of Kernel
☐ 3 = Depth 50% or less of Kernel

E. COLOR

- ☒ 1 = White
☐ 2 = Amber
☐ 3 = Red
☐ 4 = Other (Specify) _____

F. TEXTURE

- ☒ 1 = Hard
☐ 2 = Soft
☐ 3 = Other (Specify) _____

G. PHENOL REACTION

- ☐ 1 = Ivory
☐ 2 = Fawn
☐ 3 = Light- Brown
☐ 4 = Dark- Brown
☐ 5 = Black

H. SEED WEIGHT

- ☒ ☒ 36 g/1000 Seed (whole number only)

I. GERM SIZE

- ☒ 1 = Small
☐ 2 = Mid-Size
☐ 3 = Large

14. DISEASE: (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|--|---|
| <input checked="" type="checkbox"/> 2 Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) | <input checked="" type="checkbox"/> 2 Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) |
| <input checked="" type="checkbox"/> 2 Stripe Rust (<i>Puccinia striiformis</i>) | <input type="checkbox"/> Loose Smut (<i>Ustilago tritici</i>) |
| <input type="checkbox"/> Tan Spot (<i>Pyrenophora tritici-repentis</i>) | <input type="checkbox"/> Flag Smut (<i>Urocystis agropyri</i>) |
| <input type="checkbox"/> Halo Spot (<i>Selenophoma donacis</i>) | <input type="checkbox"/> Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>) |
| <input checked="" type="checkbox"/> 3 <i>Septoria nodorum</i> (Glume Blotch) | <input type="checkbox"/> Dwarf Bunt (<i>Tilletia controversa</i>) |
| <input type="checkbox"/> <i>Septoria avenae</i> (Speckled Leaf Disease) | <input type="checkbox"/> Karnal Bunt (<i>Tilletia indica</i>) |
| <input checked="" type="checkbox"/> 3 <i>Septoria tritici</i> (Speckled Leaf Blotch) | <input checked="" type="checkbox"/> 3 Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) |
| <input checked="" type="checkbox"/> 3 Scab (<i>Fusarium</i> spp.) | <input type="checkbox"/> "Snow Molds" |
| <input type="checkbox"/> "Black Point" (Kernel Smudge) | <input type="checkbox"/> Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |
| <input type="checkbox"/> Barley Yellow Dwarf Virus (BYDV) | <input type="checkbox"/> Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>) |
| <input checked="" type="checkbox"/> 1 Soilborne Mosaic Virus (SBMV) | <input type="checkbox"/> Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>) |
| <input type="checkbox"/> Wheat Yellow (Spindle Streak) Mosaic Virus | <input type="checkbox"/> Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>) |
| <input type="checkbox"/> Wheat Streak Mosaic Virus (WSMV) | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Other (Specify) _____ | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Other (Specify) _____ | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Other (Specify) _____ | <input type="checkbox"/> Other (Specify) _____ |

15. INSECT: (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

- MAH 10-15-04
 Resistant
 biotypes GP, E
 susceptible
 biotype L
- PLEASE SPECIFY BIOTYPE (where needed)
- ☒ 3 Hessian Fly (*Mayetiola destructor*)
- ☐ Stem Sawfly (*Cephus* spp.)
- ☐ Cereal Leaf Beetle (*Oulema melanopa*)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

15. INSECT: (continued) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

PLEASE SPECIFY BIOTYPE (Where Needed)

<input type="checkbox"/>	Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Greenbug (<i>Schizaphis graminum</i>)	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Aphids	<input type="checkbox"/>	Other (Specify) _____

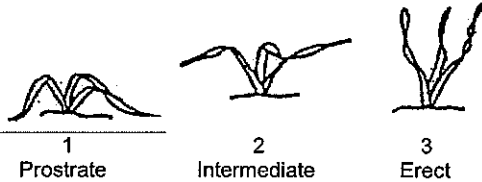
16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

WHEAT DESCRIPTOR ILLUSTRATIONS

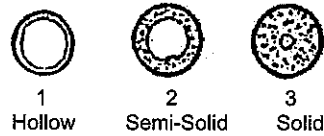
Section Numbers Correspond to the Numbers of the Sections on the Form

2005 00 003

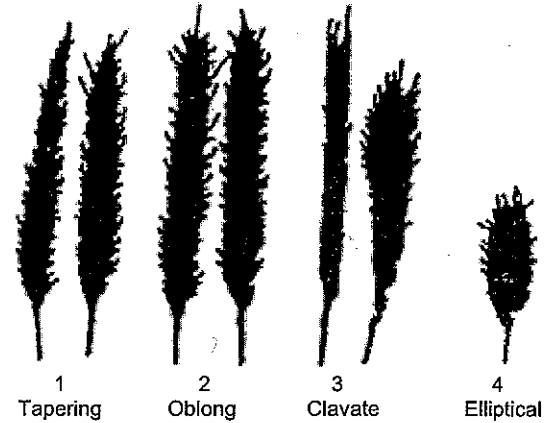
4. EARLY PLANT GROWTH HABIT:



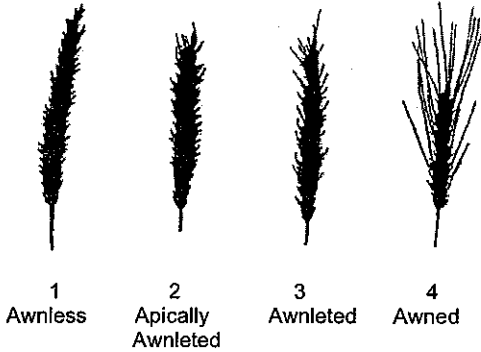
10. STEM INTERNODE X-SECTION:



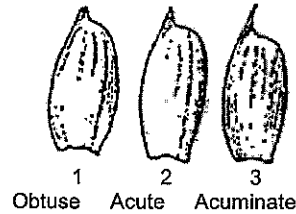
11. SPIKE SHAPE:



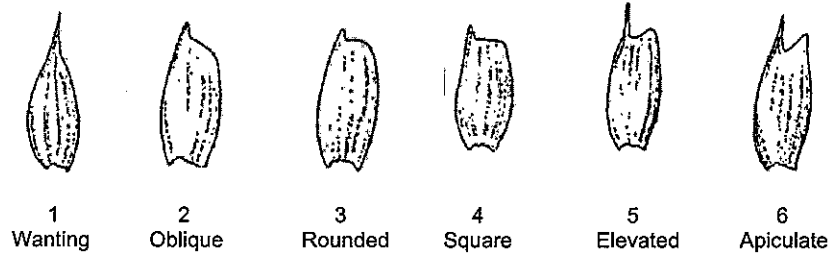
11. AWNEDNESS:



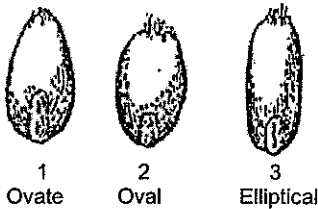
12. BEAK SHAPE:



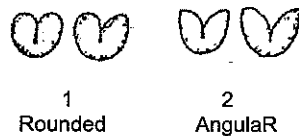
12. SHOULDER SHAPE:



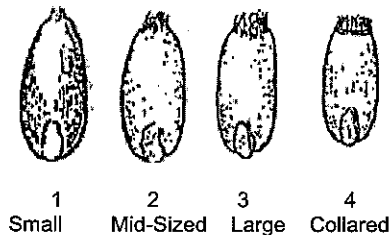
13. SEED SHAPE:



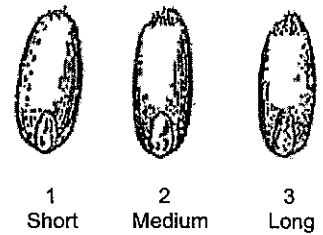
13. CHEEK SHAPE:



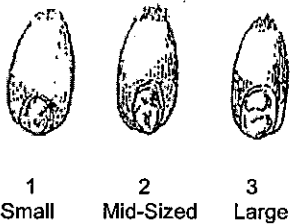
13. BRUSH SIZE



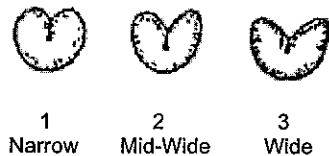
13. BRUSH HAIR LENGTH:



13. GERM (EMBRYO) SIZE:



13. SEED CREASE WIDTH:



13. SEED CREASE DEPTH:



LA841 wheat
Exhibit D
Additional Description of Variety

LA841 is A short vernalization winter wheat adapted to the Gulf Coast and southeastern wheat regions of the US. It is somewhat taller than most varieties and mid-early heading. It has long awns and distinctly dark waxy leaves. It has excellent grain yield, good lodging resistance, and is resistant to stripe rust, stem rust, and leaf rust. The reaction of LA841 to powdery mildew is intermediate and ranges from resistant to moderately susceptible depending on race and location. The test weight of La841 is average, about equal to that of Agripro Natchez and Terral LA422.

Milling and Baking Quality:
In compliance with PL 91-577:

LA90518 (LA841) had excellent milling and baking quality in tests conducted by the USDA Soft Wheat Quality Lab at Wooster, OH as part of the 2001 USDA Soft Red Winter Wheat Nursery. It rated an 'A' and a 'B' for overall milling score and baking score, respectively, in each of two regions. It had a milling quality score of 103.5 and a baking quality of 97.7, both excellent. Means of all entries were 99.0 and 91.7. Softness equivalent was 58.8; flour yield 72.5%; flour protein 9.8%; AWRC 57.4%; cookie diameter 17.9 cm; and top grain 2.5.

LA90518 (LA841) had excellent milling and baking quality in tests conducted by the USDA Soft Wheat Quality Lab at Wooster, OH as part of the 2000 USDA Soft Red Winter Wheat Nursery. It rated an 'A' and a 'B' for overall milling score and baking score, respectively, in each of two regions. It had a milling quality score of 103.7 and a baking quality of 97.1, both excellent, compared to the quality standard of 100 and 100. Softness equivalent was 58.6; flour yield 72.8%; flour protein 10.01%; AWRC 55.7%; cookie diameter 17.7 cm; and top grain 4.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Board of Supervisors of Louisiana State University and A&M College	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER LA90518PB43-3-1-4	3. VARIETY NAME LA841
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) LSU AgCenter 104 J. Norman Efferson Hall PO Box 25055 Baton Rouge, LA 70894	5. TELEPHONE (Include area code) (225) 578-2110	6. FAX (Include area code) (225) 578-1403
7. PVPO NUMBER		2005 00003

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒

YES

☐

NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☒

YES

☐

NO

10. Is the applicant the original owner?

☒

YES

☐

NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐

YES

☐

NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐

YES

☐

NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Licensed to Terral Seed Inc. for exclusive marketing

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.